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## FIVE CASES OF LARGE, VISIBLE, PULSATING ARTERY ON THE POSTERIOR WALL OF THE PHARYNX, WITH REMARKS.<sup>1</sup>

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CASE I. E. N., a girl, thirteen years old, came to me at the Boston Dispensary, complaining of nasal catarrh and enlarged cervical glands; she had also an atrophic pharyngitis. My attention was immediately drawn to two large, pulsating vessels on the back of the pharynx, about quarter of an inch inside the posterior pillar of the fauces, and lying directly beneath the mucous membrane. By slightly depressing the tongue the lowest point of the pulsation was easily seen, the upper limit was a little higher than the base of the uvula. The vessels were nearly vertical, and the left one had a more marked pulsation than the right. To the finger the impression was given of an artery fully as large as the radial. Fig. 1 will give a very good idea of the vessels. The patient knew nothing of this condition of her pharynx. Thinking that the large cervical glands might, by pressure, be the cause of this pulsation, I watched carefully to see if the vessels diminished in size as the glands grew smaller. But such was not the case. The glands entirely disappeared and the nose much improved, but the pulsation continued as before. I saw her the other day, eighteen months after her first visit, and found no change in the vessels.

CASE II. Mary C., eighteen years old, came to me

<sup>1</sup> Read at the meeting of the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, February 9, 1887.



complaining of nasal catarrh and some atrophic pharyngitis. There was a large, pulsating vessel on the posterior wall of the pharynx on the left side, as in Case I, but none was seen on the right. There were no large cervical glands.

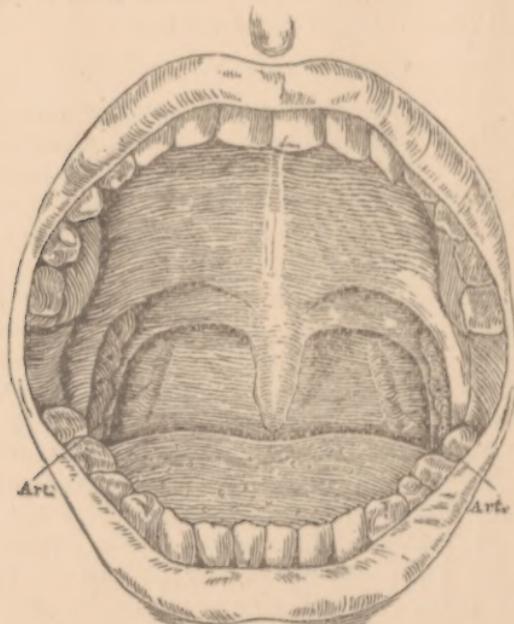


FIG. 1.

**CASE III.** Annie M., twenty-three years of age, came to me for post-nasal catarrh. On the back of her pharynx were two large, pulsating arteries, almost an exact counterpart of Case I.

**CASE IV.** This was a woman about thirty years old, and was seen at the Massachusetts General Hospital, by Drs. F. I. Knight and F. H. Hooper. No notes of the case are at hand, but Dr. Hooper thinks the large vessel was on the back of the pharynx, about

half-way between the uvula and the posterior pillar of the fauces on the right side.

CASE V. A little girl, four years old, came to me for nasal catarrh. On the posterior wall of her pharynx on the right side was a large pulsating vessel as in the other cases. The glands of the neck were slightly enlarged. A sister, five and a half years old, has beginning atrophic pharyngitis and rhinitis but no artery visible.

All the other cases seen by me were women, and in all the pharynx was atrophic, in two markedly so, the mucous membrane being thin, dry and shining.

This condition must be very rare, for I find no mention of it in text-books or in the literature of the subject. In my service of five years in the throat-room of the Boston Dispensary, I had never met with a case, and yet my three cases were seen within a week or two of each other, as is often the case with rarities.

In regard to what vessels these are, let us look at the normal blood-supply of the pharynx. The pharynx receives its blood principally from the ascending pharyngeal, a branch of the external carotid and the ascending palatine, a branch of the facial. (See Fig. 2).

Cruveilhier<sup>2</sup> says: "The ascending pharyngeal is the smallest branch of the external carotid. Its calibre is in inverse proportion to that of the palatine branch of the facial. I have seen it as large as the occipital. Its pharyngeal branch sub-divides at the base of the skull into several branches which penetrate the very dense fibrous tissue at the insertion of the pharynx to the occiput. These then turn downward, and terminate in the walls of the eustachian tube and the muscles of the pharynx. In a case of absence of the palatine branch of the facial I have

<sup>2</sup> Anat., Vol. 3, page 86.

seen the pharyngeal branch very large, supply the tonsil and ramify and lose itself on the veil of the palate."

Sappey<sup>3</sup> says: "The ascending pharyngeal is distinguished from the other branches of the external carotid by its small size and vertical direction."

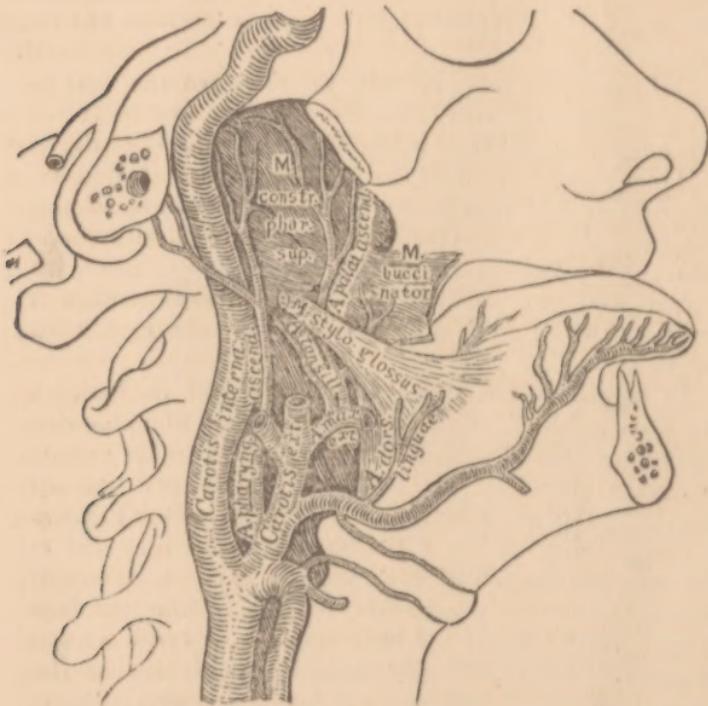


FIG. 2.

Gray<sup>4</sup> says: "The largest of the pharyngeal branches of the ascending pharyngeal passes inward, running upon the superior constrictor and sends ramifications

<sup>3</sup> Anat. Descrip., Vol. 2, page 575.

<sup>4</sup> Anat., p. 404.

to the soft palate, eustachian tube and tonsil, which take the place of the ascending branch of the palatine when that vessel is of small size." With regard to the ascending palatine, Gray says :<sup>5</sup> "It passes up between the stylo-glossus and stylo-pharyngeus to the outer side of the pharynx. After supplying these muscles, the tonsils and eustachian tube, it divides near the levator palati into two branches; one follows the course of the tensor palati and supplies the soft palate and palatine glands. The other passes to the tonsil, which it supplies, anastomosing with the tonsillar artery. The tonsillar branch passes up along side of the pharynx and perforating the superior constrictor, ramifies in the substance of the tonsil and the root of the tongue."

According to the above descriptions it seems as if, in my cases, the vessels were the ascending pharyngeal arteries, from their situation on the superior constrictor and their vertical direction, and, inasmuch as mention is made of the increased size of the vessel when the ascending palatine is small, it is possible that the latter vessels in my cases were unusually small. The atrophy of the mucous membrane allowed the pulsating vessel to be seen more readily.

The surgical importance of these cases is sufficiently evident. In case it were necessary to make an incision in the back of the pharynx, as in retro-pharyngeal abscess, we see how great the risk of an alarming haemorrhage might be. In all cases, where possible, it is advisable to examine with the finger, before operating, to see whether an artery of abnormal size or situation is present.

Dr. Porter<sup>6</sup> relates a case of recurrent haemorrhage from behind the left tonsil, which he thought came

<sup>5</sup> Anat., page 451.

<sup>6</sup> Tr. Am. Med. Association, 1882, page 511.

from the tonsillar artery or from a branch of the ascending pharyngeal; also a case of haemorrhage from an ulcer on the posterior surface of the soft palate, probably from the same vessels.

Dr. E. Carroll Morgan, of Washington, D. C., who has recently written a paper on "Haemorrhage following Uvulotomy," writes me as follows: "Obstinate bleeding following uvulotomy is, in my opinion, often due to the condition your cases so well illustrate. Literary research has surprised me, I confess, and I have now collected seventeen cases of dangerous haemorrhage after this simple operation. Twelve of these have never been published, and were obtained by personal letters. Strange as it appears, the possibility of an anomalous artery being a factor in the dangerous haemorrhages which here followed uvulotomy has never been mentioned in connection with reported instances."

These arteries must also be taken into consideration in cases of surgical treatment of the tonsils. Many cases of haemorrhage following tonsillotomy are reported. In most of them no mention is made of the finding of an artery of unusual size, but it seems to me that a careful examination would have revealed this condition in some of the hitherto unexplained cases of haemorrhage.

Downie,<sup>7</sup> speaking of tonsillotomy, says: "Of the vessels in the immediate neighborhood, the ascending pharyngeal is the only one which might be damaged, and this only in unwarrantably free incision into the tonsils, never in excision. Billroth<sup>8</sup> removed the left tonsil of an hysterical lady. The organ was pulled toward the middle line and a fold of the pharyngeal mucous membrane was probably drawn out and cut

<sup>7</sup> Edinb. Medical Journal.

<sup>8</sup> Lancet, 1870, Vol. II.

with the tonsil. A fearful hæmorrhage occurred, which Billroth thought came from some large branch of the ascending pharyngeal.

In Schmidt's "Jahrbücher," Vol. 186, is related a case of severe hæmorrhage after cutting off the left tonsil. Various haemostatics were tried unsuccessfully, and in three hours the common carotid was tied. In this case the cause of the haemorrhage was thought to be some abnormal ramification of the vessels.

Other similar cases might be cited, but these will serve to show the importance of bearing in mind the possibility of having to do with a condition such as I have described, and also the need of making a thorough examination before operating on the throat.

